

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
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1. REPORT DATE (DD-MM-YYYY) 08-12-2008		2. REPORT TYPE Final Report		3. DATES COVERED (From - To) JULY 2007 TO JULY 2008	
4. TITLE AND SUBTITLE Forging the Future: Establishing Core Competencies and the Skills, Knowledge and Abilities of Navy Junior Medical Service Corps Officers				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
				5d. PROJECT NUMBER	
6. AUTHOR(S) SHAW, KENNETH A. III, LT MSC				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Health Clinic New England 43 Smith Road Newport, RI 02841				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) US Army Medical Department Center and School BLDG2841 MCCS-HFB (Army-Baylor Program in Health and Business Administration) 3151 Scott Road, Suite 1411 Fort Sam Houston, TX 78234-6135				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S) 32-08	
12. DISTRIBUTION/AVAILABILITY STATEMENT APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT The purpose of this research is to achieve consensus among Navy Junior Medical Service Corps officers about the competencies and important skills, knowledge, and abilities (SKAs) required for success over the first five to ten years of their careers using two iterations of the Delphi technique to collect the relevant data. In Wave I, 63 out of 373 Junior Medical Service Corps Officers (MSCs) identified the five most relevant competencies and SKAs, 18 tentative competency domains emerged: leadership, professional development, personal traits, management, joint operations, business management, strategic management and critical thinking, military knowledge, communication, clinical/ scientific, operational experience, mentorship, miscellaneous, human resources, teamwork, computers/ technical, organizational behavior, and healthcare. Reviewed by an expert panel, the results were consolidated into 11 competency domains and used to develop the questionnaire for Wave II which determined SKA importance ratings. Using the same 373 member respondent pool, 80 MSCs rated 139-SKA items. The top 5 SKAs were: "doing the right thing when no one is around," "ability to read, write and speak clearly," and "initiative and drive," "knowledge of a specialty area," and					
15. SUBJECT TERMS Navy Junior Medical Service Corps (MSC) Officers Skills Knowledge and Abilities (SKAs)					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT		18. NUMBER OF PAGES
a. REPORT U	b. ABSTRACT U	c. THIS PAGE U	UU		66
			19a. NAME OF RESPONSIBLE PERSON Rene Pryor		
			19b. TELEPHONE NUMBER (Include area code) (210)221-6443		

Forging the Future: Establishing Core Competencies and the Skills, Knowledge and Abilities of
Navy Junior Medical Service Corps Officers

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Army-Baylor University Graduate Program in Health and Business Administration

20090210146

Acknowledgements

I would like to thank my preceptor, CDR John LeFavour, for allowing me to work on this project while encouraging me to take an active role at Naval Health Clinic New England (NHCNE). His constant support throughout the entire residency process has provided me with a valuable experience. I would also like to thank LCDR Michael Grande who took on the responsibility of guiding me through the early stages of my residency. I must also thank LT Cindi Palacios my co-researcher, classmate, and friend. Her confidence and counsel helped tremendously in keeping me on track with this project. I would also like to thank CAPT Elizabeth Nelson, Commanding Officer NHCNE, for taking on the responsibility and commitment of accommodating a Baylor resident. Thanks need also go to Dr. A. David Mangelsdorff and LT Suzanne Wood, Army-Baylor University Graduate Program in Health Care Administration. Without their patience and continual gentle prodding I would never have completed this project and the Army-Baylor program. Finally, I would be amiss if I did not thank my family for their support and patience. To my Wife Heather and sons Garrett and Justin I thank you for your sacrifice over the last two years while I undertook the task of completing my Graduate degree.

Abstract

The purpose of this research is to achieve consensus among Navy Junior Medical Service Corps officers about the competencies and important skills, knowledge, and abilities (SKAs) required for success over the first five to ten years of their careers using two iterations of the Delphi technique to collect the relevant data. In Wave I, 63 out of 373 Junior Medical Service Corps Officers (MSCs) identified the five most relevant competencies and SKAs, 18 tentative competency domains emerged: leadership, professional development, personal traits, management, joint operations, business management, strategic management and critical thinking, military knowledge, communication, clinical/ scientific, operational experience, mentorship, miscellaneous, human resources, teamwork, computers/ technical, organizational behavior, and healthcare. Reviewed by an expert panel, the results were consolidated into 11 competency domains and used to develop the questionnaire for Wave II which determined SKA importance ratings. Using the same 373 member respondent pool, 80 MSCs rated 139-SKA items. The top 5 SKAs were: “doing the right thing when no else is around,” “ability to read, write and speak clearly,” and “initiative and drive,” “knowledge of a specialty area,” and “judgment.”

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Forging the Future: Establishing Core Competencies and the Skill, Knowledge and Abilities of Navy Junior Medical Service Corps Officers

Introduction

Conditions Prompting this Study

In 1993, the Military Health System (MHS) embarked on a new mission to become the largest Health Maintenance Organization (HMO) in the world. This transformation in the way health care was delivered by the military medical department was encouraged by unprecedented levels of environmental instability, financial uncertainty, and organizational volatility, the same constraints that had already been well introduced to the civilian sector. The challenges of containing costs, improving access, and sustaining quality in the face of a downsizing force brought healthcare administration to the forefront of military medicine (Hudak, Brooke, & Finstuen, 1994).

The shifting need of the healthcare industry has been dominated by changing demographic structures, changing roles of hospitals and related healthcare institutions, rising healthcare expenditures, tiered payor and insurance systems, and patterns in healthcare employment. These prevalent changes in the healthcare industry have created a recurring need to identify core competencies for junior healthcare executives into the next decade. "The goal of competency research is to change healthcare management and education for the better" (Shewchuk, O'Connor, & Fine, 2005, p. 33). With these changes and added responsibilities of understanding and implementing joint ventures, alliances, and partnerships with other organizations, identifying core competencies and skills, knowledge, and abilities (SKAs) is crucial for the development of educational and mentorship programs that prepare junior healthcare executives for success in an increasingly complex environment.

The changing dynamics of the military healthcare system create both challenges and opportunities for the junior healthcare executive, specifically the Medical Service Corps Officer (MSC). These officers are faced with the challenging task of optimizing healthcare for garrison and combat missions. In garrison MSC officers must deal with the varying needs of multiple beneficiary populations, supply the resources for providers to deliver care, and direct change while using innovative management skills. In support of the war fighter, MSC officers must adapt their leadership and executive skills to manage a multitude of missions, such as: joint blood programs, trauma and triage units, and joint medical regulating programs. Rear Admiral Mittelman (2007) states, "Navy Medical Service Corps Officers play a key and essential role to assure that our forces are ready, remain healthy and the healthcare benefit is delivered efficiently and effectively. Each specialty within the Medical Service Corps provides relevant and critically important services to the joint force" (p. 1). Identifying core competencies for subspecialties within the Medical Service Corps is imperative for the successful development of junior Medical Service Corps officers in support of the joint mission. It is more important to identify what the Sailor needs to know rather than what the individual needs to know.

Literature Review

For almost fifteen years, the U.S. Army-Baylor Graduate Program in Health Care Administration (HCA) has amassed a body of research, documenting executive competencies and skills in health care. This has contributed to the literature and inquiry within health services, and has provided guidelines for the development of curricula within the Army-Baylor graduate program and civilian education programs. Results from executive skills research are continuously used to validate current Army-Baylor University HCA graduate program

objectives. Other civilian agencies, such as the American College of Healthcare Executives (ACHE), Medical Group Management Association's (MGMA) Center for Research in Ambulatory Health Care Administration, and recently the American Pharmacy Association (APhA) have used, and are continuing to use, the results from the U.S. Army-Baylor Delphi studies to determine needs and topics for continuing health care administration education and professional conferences (Finstuen & Mangelsdorff, 2005).

Navy Healthcare Executive Studies

Over the last nine years, numerous studies have documented the importance of identifying core competencies for Navy healthcare executives. An initial Delphi study conducted by Sentell & Finstuen (1998) of senior naval hospital executives identified 106 unique issues that were separated into nine domains. Results indicated that while a business orientation is needed for organizational survival, an emphasis on person-oriented SKAs is required for future success as a healthcare executive in the Navy healthcare system. A Delphi study conducted by Marty (2005) tested whether or not the core competencies from Sentell and Finstuen's study (1998) had changed for senior Navy healthcare executives. Marty's study showed that competencies surrounding interpersonal skills were still as important in 2005 as they were in 1998.

Competencies and SKAs surrounding strategic planning and understanding the environment emerged as most critical for senior Navy healthcare executives into the next decade. Marty also tested the difference of opinions between senior and junior Navy hospital executives. Results indicated statistically significant differences in opinions between groups and among 20 of the 100 individual SKAs rated indicating that senior and junior healthcare executives had very real differences in opinion regarding required executive skills. Marty suggests, "This study indicates

a need for improvement in the development of junior Navy healthcare executives specifically in the area of interpersonal skills and understanding the environment” (p. 31).

In 2001, Peters, Dominguez & Finstuen conducted a study of executive leadership competencies for Navy Dental Corps officers. Their study identified seven competencies required by senior Dental health care executives. The two main competencies identified were personnel management and leadership; other competencies identified included: dental health care management, resource management, recruitment and retention, and “thinking outside of the box.” These results are consistent with the challenges faced by the executive Dental Corps leaders over the previous five years. This study determined that identifying the skills, knowledge, and abilities for senior Dental Corps leaders was imperative to the success of future Dental Corps executives, and that a commitment to developing and mentoring SKA requirements be made by executives within the Dental Corps.

DoD Healthcare Executive Studies

While the studies by Sentell and Finstuen (1998) and Marty (2005) are the only existing literature solely focused on Navy health care administrators, there have been multiple studies on executive competencies conducted throughout the Department of Defense (DoD) and civilian health care sectors. Mangelsdorff, Rogers, Zucker, Thieschafer, Hagen, and Finstuen (1997) performed a Delphi study of Army senior MSC leaders to identify the expected behaviors and competencies needed to ensure the future success of junior MSC officers into the 21st century. Two iterations of the Delphi were conducted on senior Army MSC leaders in the pay grade of Colonel. The study identified 41 important behaviors necessary for future success. The most important were: integrity, moral courage, responsibility, accountability, and competent-proficient.

Hudak, Brooke, and Finstuen (2000) conducted a comprehensive review of Delphi studies regarding executive competencies in the health care industry. The study reviewed the findings of six previous Delphi studies, each of two iterations, conducted on senior health care executives from both the civilian and federal sectors. The first iteration required respondents to identify the top five executive competencies and associated SKAs necessary for success. The second iteration required the respondents to rate the competencies and their SKAs to determine the most important executive competencies. The study concluded that there was an overall discrete set of competencies that executives should possess in order to be successful in the future.

Additionally, Stevens (2003) studied senior Air Force MSC officers serving in the rank of Colonel and Lieutenant Colonel to identify executive skills for leaders in the Military Healthcare System (MHS). This study established a prioritized list of executive competencies rank ordered by importance for Air Force MSCs. In conjunction, research identified apparent strengths and weaknesses in the preparation level of junior executives in the career field. Finally, this study established the benchmark of current leadership thinking and provided insight into the world of executive skills for Air Force MSC officers.

Civilian Healthcare Executive Studies

Finally, in 1993 Hudak, Brooke, Finstuen, and Riley conducted a nationwide sample of 50 Fellows of the American College of Healthcare Executives (ACHE). The purpose was to identify the most important competencies in the field of health care administration. The top five competencies domains identified were: cost/finance, leadership, professional skill interactions, health care delivery concepts, and access to care. The top five SKAs identified were: patience, listening skills and communications; leadership, management and human relations; strategic thinking and sense of vision; understand physician motives, needs and politics; and conflict

management, team-building and motivational leadership. This study illustrated that successful health care administrators must have a strong business sense and sound human relations skills.

Shewchuk, O'Connor, and Fine (2005) declare, "Environmental change has occurred with such speed that the educational component of healthcare management must struggle to keep up-to-date" (p. 33). Through this struggle comes opportunity. As stated by Rear Admiral Mittelman (2007), "...our Corps is vibrant and our Corps is strong. The future is bright. However, demands of changing world present new opportunities. I believe these will require us to become less specialized in some areas in order to be more interoperable and function more efficiently in a joint environment" (p. 2). With this changing environment, Medical Service Corps officers, both administrators and clinicians alike, need to have a clear understanding of their roles and responsibilities and how they integrate into the healthcare system. Identifying core competencies and SKAs for Navy junior health care executives, MSC Officers, will aid in the development of healthcare management, education, and quality management programs.

Methods

Purpose

The purpose of this Delphi study is to identify the relevant competencies and important associated SKAs junior Navy MSC Officers require for enhancing their success over the next five to ten years. This study will also determine if similarities in the relevant competencies and associated SKAs exist between the three subspecialties of the Navy Medical Service Corps.

Theoretical Model

The Delphi technique was originally developed by the Rand Corporation to gather opinions from a group of experts (Patton, 1986). Employed since the 1960's, the Delphi

technique has been used to determine priorities and forecast future trends. Applied across many disciplines including medicine, administration, technical forecasting and program evaluation, the Delphi technique has become a recognized consensus-building tool (see Figure 1). In the last ten years, the increased utilization of the Delphi technique among healthcare executives has validated the technique's relevancy to forecasting outcomes of new policies, identifying core competencies, and identifying SKAs (Rowe & Wright, 1999).

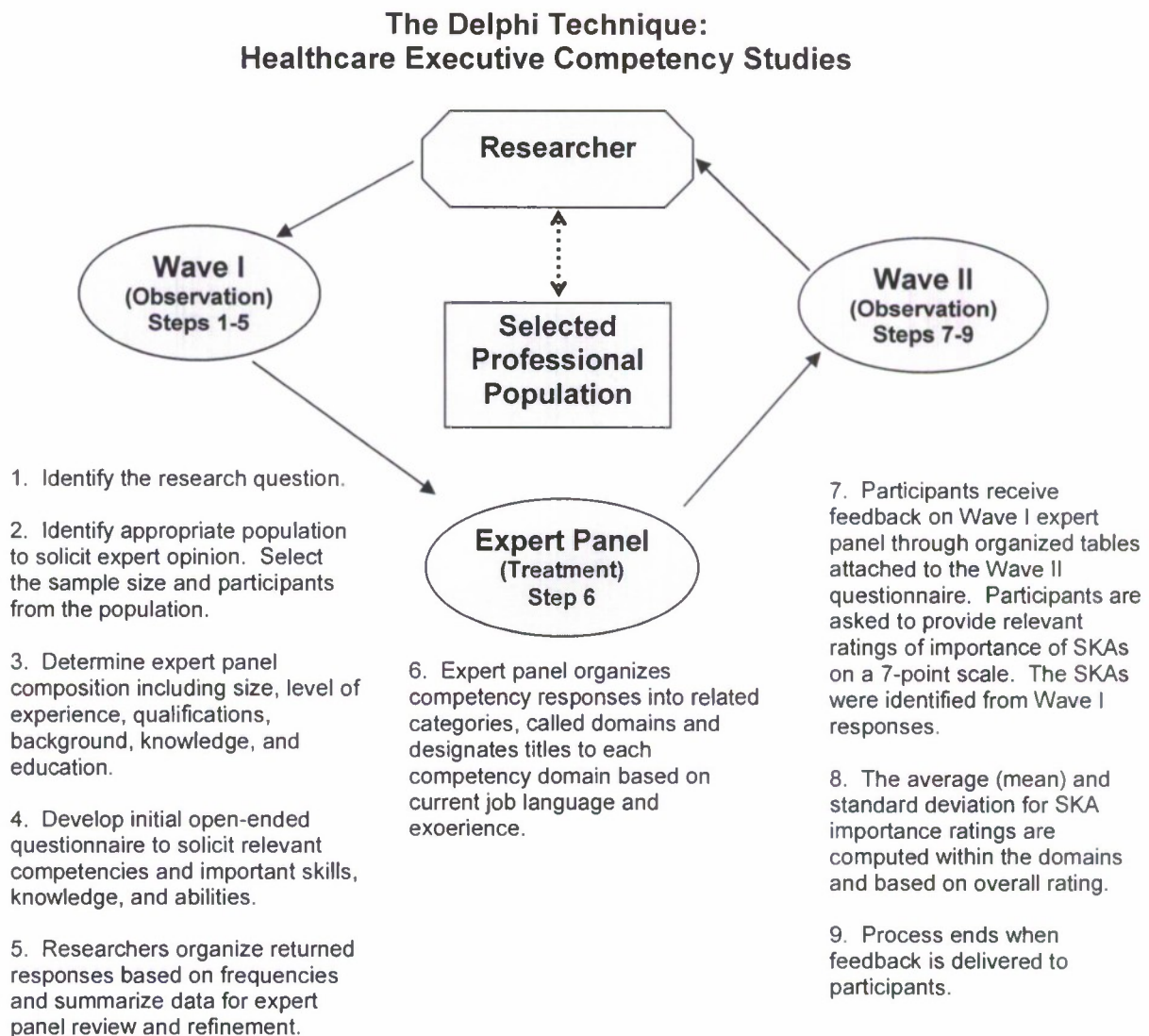


Figure 1. The Delphi Process as used in studies conducted by Army-Baylor University H&BA graduate faculty and students

The Delphi technique seeks to obtain a consensus of expert opinions through a series of structured questionnaires characterized by anonymity of responses and controlled feedback. This technique allows participants to state opinions, discover other viewpoints, raise issues and potential problems, set goals and priorities, and come to a decision. The data from the responses generates a common language among the field experts and executives (Patton, 1986). The Delphi technique can provide a more updated exchange of scientific or technical information than a literature search by drawing upon the current knowledge of experts (Dalkey, 1969). Additionally, as stated by Delbecq, Van de Ben, & Gustafson (1975), “It can also be used to clarify positions and delineate differences among diverse reference groups” (p. 85).

A multiple wave decision-making tool, the Delphi technique allows for anonymity in collecting expert opinion within a specific profession. It is a series of questionnaires and ends when consensus has been achieved among participants or when sufficient information has been exchanged. Cline (2000) states, “The Delphi is particularly appropriate when decision making is required for subjective or emotional environments. This tool works formally or informally, in large or small contexts, and reaps the benefits of group decision making while insulating the process from the limitations of group-decision making; e.g. over –dominant group members or political lobbying” (p. 2). The Delphi technique has the added advantage to work as an informal, subjective model when decisions are based on opinion and can be directly converted to a formal model, when the data is more knowledge-based (Cline, 2000).

The Delphi technique includes a series of rounds of questions asked of experts on the subject, known as iterations. The experts submit their judgments, researchers tabulate, and the results are sent back to the experts for modification. The experts in this second iteration are asked to reevaluate their original judgments in light of the average estimates calculated in the

first round. This procedure of reevaluation is continued for several waves until a fair degree of consensus is reached, or until the experts no longer modify their previous estimates (Rowe & Wright, 1999).

Research Questions

How is competency defined? “Competency” has two relevant meanings: The first addresses the ability of an individual to perform effectively in a job-relevant area. The second is a definition of what is required of an individual for effective performance. These two are closely related but distinct. The second meaning involves defining what is important to success on a job, while the first deals with the degree to which an individual does what is important to a job. Defining job competencies is useful in assisting individuals as they develop their proficiency for that particular job.

How are skills, knowledge, and abilities defined? For this study the expert panel assembled by CAPT Martha Slaughter of NMPT&E determined the definition of SKAs. The designation of an SKA by this panel was “a self initiated acquisition of current and new knowledge and technologies required for performing the work of your organization” (expert panel requested quote).

Defining the Junior Navy MSC

In U.S. military usage officers are broken into two distinctive groups, company and field grade. A company-grade officer is an Ensign, Lieutenant Junior Grade, or Lieutenant; the ranks of O-1 to O-3. In the Army, company-grade officers are typically assigned to a company as a platoon leader or executive officer (lieutenants) or as a commander (captains.) They may also be assigned as staff officers. They may preside over a summary court-martial. In the Navy, a company-grade officer is called a junior officer or JO. Furthermore, the Navy identifies a junior

officer as an officer who has not come into the “below zone” range for promotion. Within this study the junior MSC is defined as any O-3 falling outside of the “below zone” lineal listing for promotion eligibility to O-4.

Defining Navy MSC subspecialties

Within the Navy officers and enlisted alike are given codes, usually four digit numbers, that provide a reference to specialty education and training they have within a specific field. The MSC community is no different. Within the MSC community there exists 31 subspecialties. These subspecialties can, and for purposes of this research will, be grouped into three overarching categories. They are: *Administrators*, MSC’s holding the subspecialty codes within 18XX, 3000, 3112, 3130 and 3211, *Clinicians*, MSC’s holding the subspecialty code beginning 1874 through 1893 and finally, *Research Sciences*, MSC’s holding selective subspecialty codes between 1810 and 1865.

Hypotheses

This study will focus on testing for four hypotheses: That relevant competencies and important skills, knowledge, and abilities (SKAs) exist for junior Navy MSC officers. That there are differences of SKAs in each domain. That there are differences among the clinical, administrative, and research MSC subspecialties regarding SKAs and overall group membership. Finally, that interaction effects exist among the clinical, administrative and research subspecialties for SKAs.

Significance of the study

The results of this proposed study will impact the future of the Medical Service Corps, its officer development programs, and help to identify additional requirements for officer accessions and in-service procurement programs. Additionally, identifying core competencies and SKAs for

junior Navy MSC officers will improve healthcare management and education (Shewchuk, O'Connor, & Fine, 2005). Competency research coupled with already established training programs will help build junior officers from within the Navy MSC, resulting in well-rounded junior officers ready to take the next healthcare executive challenge.

A consensus of expert group opinion may be useful for mentoring, self-assessment, and professional development. This research will assist professional affiliations and organizations to determine continuing education requirements and set educational learning plans for junior Navy healthcare executives within the Medical Service Corps. In addition, identified core competencies will provide clear guidance for junior Navy healthcare executives to shape and mold their own development. As stated by Rear Admiral Mittelman (2007), "Mentoring is a two way street; I expect senior leaders to teach and provide guidance to juniors, but our junior officers must also take responsibility for their own career progression"(p. 2). Clear expectations are paramount for the development and success in young leaders and have the potential to motivate and satisfy personnel within their profession (Blanchard, 1983). This capability can also be useful for recruitment and retention programs, establishing the Navy as the benchmark for development and feedback programs, a strong characteristic desired throughout healthcare management community.

Validity and Reliability

Validity and reliability of measurement will be accounted for in this study using several methods. Face validity, addresses the reasonableness of the study and is addressed by using subject matter expert terminology. Content validity, unlike face validity, does not depend on established theories for support (Fink, 1984). Content validity will be addressed by using responses from experts within the Navy MSC. Construct validity is attained since this study

replicates the data-gathering methods, procedures, and techniques, of previously published Delphi studies. The Delphi technique has been used across several disciplines and has produced consistent and similar results. Additionally, to establish the extent to which the same results would be obtained from another study sample, inter-rater reliability will be tested using Cronbach's coefficient alpha (Nunnally, 1978).

Selection of participants

Participants in the study were active duty Navy MSC Officers holding the rank of O-3, Lieutenant. To estimate FY09 promotion zones for Lieutenant Commander, including in zone and junior eligible, participants with date of rank from 01 July 2002 through 01 July 2005 with lineal numbers of 10872400 through 12803800 were selected. Additionally, each participant held a primary or secondary subspecialty of 18XX. Total population of 553 was derived from the manpower database obtained from Navy Medicine, Manpower, Personnel, Training and Education Command dated April 2007. This population is comprised of 303 Medical Service Corps officers holding clinical subspecialties and 250 Medical Service Corps officers holding administrative and research subspecialties. Of the 553 eligible participants contact information was only available for 373 MSCs.

The Delphi technique applies two separate iterations, to obtain the field-generated data and important relevance ratings. Wave I is characterized by solicitation of data through an open-ended questionnaire and the follow-on categorization of that data by an expert panel. Wave II is characterized by the assembly of feedback from the Wave I open-ended questionnaire and the subsequent relevant importance ratings (Dalkey, 1969).

Delphi WAVE I

In September 2007, questionnaires were posted on Navy Medicine Online and a link was sent via email to active duty Navy MSC Officers holding the rank of O-3, Lieutenant, in zone or junior eligible for promotion to Lieutenant Commander with a date of rank of 01 July 2002 through 01 July 2005, and holding the primary and secondary subspecialty of 18XX as of April 2007. To gain maximum participation; Specialty Leaders and Directors for Administration sent an endorsement letter and copy of the link to healthcare leaders and MSC Officer mail groups (Appendix A). Descriptive statistics were applied to WAVE I responses to identify the most-frequently cited competencies and SKAs. These competencies were then categorized into content domains and sorted by frequency.

Expert Panel

LT Palacios, LT Shaw, and LCDR Palarca facilitated the research panel in October 2007. The members of the expert panel included five MSC Officers holding the rank of Lieutenant Commander in diversified subspecialties representing both the clinical and administrative subspecialties throughout the Medical Service Corps. Additional selection criterion included current or previous experience in head leadership positions, such as: Officer in Charge, Director for Administration, Program Director Joint Blood Program, Medical Planners, etc.

The expert panel was tasked to combine, reduce, and/or expand the initial 18 competency domains. The analysis resulted in both consolidation and elimination of competency domains and competency items. The panel also reviewed the language within the content domains and reworded or renamed the content of the competencies and SKAs as needed. The expert panel discussed and sorted all competency items into domains and designated headings for each competency domain. Finally, the panel results were used to form the questionnaire for Wave II.

The competency domains were rank ordered and listed by frequency of response and corresponding relevance. Inclusion of an SKA item was proportional to its frequency within each domain. Feedback from Wave I and from the expert panel results was provided with the Wave II questionnaire. For the questionnaire the SKA items of the competencies were merged by the researchers into 100 item statements. The researchers did not modify, rewrite or standardize any of the SKA item statements. Because all SKA items reflected the language of the Wave I respondents and the expert panel, the Wave II questionnaire is a field-generated consensus-seeking tool. This provides the most accurate representation of the thinking of this group.

Delphi WAVE II

Results from the expert panel were used to develop Wave II of the study. Selection criteria for the inclusion of items came from: expert panel discussion, their personal experience, current policy and guidance from the senior leadership within the MSC, and the number of times a competency item repeated itself. Again, lead researchers created a questionnaire from the expert panel discussion, forwarded the questionnaire to eligible participants via email and posted it on Navy Medicine Online.

After compiling WAVE II results, researchers applied descriptive statistics in order to identify the top and bottom SKAs for the study data from the Wave II responses. Data from Wave II was also used to determine if interaction effects and differences exist among the three MSC subspecialty groups, these results will be shared with the MSC Specialty leaders.

Analysis strategies

Analysis of Wave I data was done with the use of basic descriptive statistics. Specifically conducting a basic frequency analysis for the data in order to determine the most cited responses.

These responses were placed into tentative domains by the researchers with their counts reflected.

To analyze the WAVE II data, inferential statistics were used to determine differences among clinical and administrator groups and among the various demographic data. A two-factor ANOVA mixed experimental design was used to test the hypotheses of differences in overall group membership; research scientist, clinical and administrative subspecialties, differences among specific domain items, and to assess potential interaction effects for the dependent variable of SKA importance ratings. Finally, Inter-rater reliability testing was conducted using Cronbach's coefficient alpha.

Expected Findings

In 1994, Hudak and researchers predicted that Military Treatment Facility (MTF) leaders would continue to confront nine major domains of issues within the Military Health Care System (MHCS) of the future. Those domains were considered by hospital commanders to be the most important domains facing the MHCS into the 21st century and are in decreasing order of importance: cost finance, health care delivery, access to care, quality and risk management, technology, professional staff relations, leadership, marketing and ethics (Hudak, Brooke and Finstuen, 1994).

It is important to note other previous research studies and their findings and how those findings relate to the data obtained in this study and how they impact the Navy MSC. A majority of previous studies document the importance of policy and legislation establishing healthcare quality measures. They also highlight the need for understanding in the areas of business and managed care. The foundations of interpersonal skills, effective communication, and leadership ring throughout the literature, and are expected to occur within this study.

Because this study identifies the relevant competencies and important SKAs necessary for success as a Junior Navy MSC a heavier focus on business acumen and leadership associated SKAs is believed to exist. No matter what level or subspecialty the Navy MSC, expectations are that the individual will possess a moderate level of communication and leadership ability. Many of the other aspects of an MSC are believed to be inherent in the daily on the job training that junior officers undergo.

Results

While only 68 responses were received for Wave I and 80 responses for Wave II of the study the response rate was in line with previous Delphi studies. Table 5 contains a complete breakdown of the demographics for the study. The expert panel evaluation left a total of eleven domains and 62 unique competency items. The expert panel defined an appropriate title for each competency domain. Response rates from Wave I were 68 responses representing 18% of the MSC population. The responses were then rank ordered by frequency (i.e. the percentage of total competencies within each domain), the competency domains were: leadership (representing approximately 19% of all competencies), management (17%), professional development (13%), subspecialty expertise (12.3%), core values (10.6%), strategic management and planning (7%), joint operations/ readiness (5%), communications (4.6%), military knowledge (4%), operational experience (4%), and mentorship (3.3%). Table 3 displays the frequency of total competencies within each domain after the expert panel review of Wave I. Wave II found a 21% response rate (80 respondents of 553) during which all 100 SKA ratings were measured by importance ratings on a 7-point Likert rating scale with 1 being a score for unimportant to 7 being a score for extremely important. Domains, the number of SKA items within each domain, and the alpha

coefficient for respondents are shown in Table 4. The coefficient alpha for administrator respondents ranged from a low of .50 in the domain of Communication to .91 in the domain of Leadership. Coefficients for the research respondents ranged from a low of .63 in the domain of Communication to a high of .92 in the domain for Management. Coefficients for the clinician respondents ranged from a low of .69 in the domain for Core Values to a high of .92 in the domain for Management. The coefficients for all respondents combined followed a similar pattern and appeared to be influenced by the administrator respondents. The overall ranges were from a low of .59 in the domain for Communications to a high of .91 in the domain for management. Though the Cronbach alpha results for the domains of Communication and Joint Operations for administrators, Communication for Research scientists, and the results for clinicians in Core values fall outside of the acceptable range the majority of results are within the acceptable range of greater than .70 as discussed by Nunnally (1978) and evidence of consistent and reproducible levels of importance rating agreement among subspecialties as well as all groups combined.

More than half of the 100 SKA items from all groups had mean ratings above 5.60 (64 SKAs had average ratings above 5.60). Forty SKAs had mean ratings at or above 6.0 for the administrators while researchers had thirty-eight SKAs with mean ratings at or above 6.0 followed by clinicians with twenty-six SKAs at or above a 6.0 mean rating score. Table 8 lists the 5 highest rated SKAs for each of the subspecialty groups. Of the 18 highest rated SKAs, all but five are common for both groups although four of five top rated SKAs for clinicians were not part of the top 18 highest rated SKAs. Mean ratings are noticeably higher for the clinician respondents than the other two subspecialties. The top 18 SKAs for the overall groups come from the Leadership, Strategic Management, Communication, Mentorship, Subspecialty

Expertise or Joint Operations domain with Core Values dominating 8 out of 18 SKAs (Table 6). Of the top 5 SKAs for all groups, in Wave II the Leadership domain accounts for two of the top 5 SKAs for the administrators, three of the top 5 SKAs research scientists, and one of the top 5 SKAs for the clinician respondents.

Table 7 lists the overall lowest rated SKAs while Table 9 lists the 5 lowest rated SKAs for each of the subspecialty groups. Only five of the 100 SKAs between the subspecialty groups received a mean rating at or below 4.6. The lowest rated SKAs for all three groups fell into the domains of management and subspecialty expertise. Of the 17 bottom rated SKAs, administrators and researchers shared many of the same lowest rated SKAs. Clinician respondents however shared only two of the 17 lowest rated SKAs those being; “Statistical analysis (regression, ANOVA, correlations), Experimental design, Critical thinking, Interdisciplinary skills” from the Professional Development domain and “CivPers (GS) MATO Contracts ISA Contracts Personal vs. Non-Personal Contracts Staffing Models Staffing Benchmarks” from the Management domain. The Subspecialty Expertise domain dominates the bottom 17 rated SKAs for all subspecialty groups, accounting for 7 of the 17 lowest rated SKAs followed by SKAs for Management, Professional development, and Operational experience. Group mean importance ratings for the two highest-rated and two lowest-rated items within each of the eleven domains are displayed in Table 12. Across the eleven domains of this table, at least one identical SKA between subspecialty groups is present.

A two factor ANOVA was calculated to compare the ratings for the three MSC subspecialties, 11 domains, and test for interaction effects. Findings are reflected in Table 10 and show that statistically significant results ($F(2,20) = 5.59, p < .001$) exist between subspecialty group and domain. This indicates that the MSC subspecialty groups differed in opinion over the

placement of SKAs within each of the eleven domains. The results in Table 10 also indicate that no statistical significance exists between the scores for Administrators and Researchers. However, significant differences existed amongst scores for Clinicians and Administrator and Researcher subspecialties. Additionally, the results showed that significant findings exist between group and domain score ($F(2,10) = 5.122, p < .000$) indicating a difference in the importance of domains. Furthermore, the overall results indicate that a difference of opinion exists amongst the three subspecialties of the Navy MSC in regard to the most important SKAs required for future success. The Navy MSC Administrator subspecialty had an overall higher average score compared to the Researcher and Clinician subspecialties. All subspecialties had a different domain ranked as number one; Administrators scored Strategic Planning high, Clinicians scored Subspecialty Expertise high, and Researchers scored Core Values high. All three subspecialties scored the Core Values domain as one of the top three domains for SKA development. Clinicians and Researchers leaned more toward Professional Development and Subspecialty Expertise as important domains for SKA development whereas the MSC Administrators felt that Leadership and Strategic Planning were important domains for SKA development.

Discussion

In 2005 LT Stephen Marty conducted a study, which updated the core competencies and associated SKAs required by Navy health care executives and looked at the differences amongst Junior and Senior health care executives. Marty's study used three waves of the Delphi technique in his research process. In Wave I, senior Navy health care executives identified the five most important competencies and their associated SKAs believed to be required for Navy health care

executives over the next decade. An expert panel of senior health care executives then reviewed and sorted the identified competencies into six domain categories and gave each domain an appropriate title. From the expert analysis, Marty developed a questionnaire for use in Waves II and III of the Delphi study. In Wave II, senior executives from Wave I rated the competencies from each domain. During Wave III, junior Navy health care executives completed the same questionnaire given to the senior executives. The study showed that statistically significant differences in opinions emerged between groups and among 20 percent of the individual SKAs rated. These results demonstrated that senior and junior health care executives have very real differences in opinion regarding required executive skills.

This study similarly to LT Marty's study found that statistically significant results exist between groups. Subspecialties within the MSC community reflected differences of opinion in the SKAs associated with career development and future success, though consistency throughout the study reflected a need for development in leadership and management domains overall. This information can be used by Navy training specialists to develop programs for use in Officer Accession programs and for the development of continuing education training. This will allow the Navy to remain current on the necessary SKAs needed and to tailor the SKAs to the specific needs of the MSC subspecialties.

Furthermore, these studies findings are Navy specific, yet evidence from the literature indicates that the civilian sector is also struggling with the disconnect between the content of academic programs and the ability of graduates to actually function in the profession. Therefore, despite the narrow focus, there may be wider applicability since this study's findings mirror those areas of importance found in similar studies conducted in the civilian sector. For example, the shift in focus to community and population health, quality, and outcomes and the importance

of leadership and ethics are noted repeatedly in the literature. The Navy, as part of the Military Health System, has shifted their focus from acute based medicine to Force Health Protection, which encompasses health promotion and prevention and evidence based medicine, which focuses on outcomes. Study respondents rate the importance of leadership and ethics as high in value. One thing to note specific to competencies is that the civilian sector appears to be tracking away from their emphasis on quantitative and financial skills, although these remain basic to functioning as a Healthcare Administrator, to focus on human resources management skills. This appears to be due not only to the increasingly complicated relationships in which healthcare organizations find themselves but the sheer number of these relationships as noted in the literature. The Navy appears to be tracking toward increased emphasis on financial and data mining skills due to the current revised financing environment and its focus on population health and evidence based medicine.

Specifically for the Navy, however, the purpose of this study was to provide a base with which to move forward in developing a more concrete training experience for Junior Health Care Administrators by identifying the needed, current competencies and their associated SKAs. The study appears to have accomplished this goal. Findings can further be used to assist in the determination for a training concentration in combinations of the top domains or separate training tracks altogether. It can also assist in the development of a new Additional Qualification Designator (AQD) such as in Managed Care or revision of existing AQDs. Individuals occupying senior positions at MTFs, Health Support Organizations (HSOs), the Bureau of Medicine (BUMED), or Tricare Management Affairs (TMA) can utilize findings to evaluate qualifications of individuals seeking positions in their organizations. Information from this study may also be used to validate the need for, and improve the quality of mentorship programs

throughout the MSC community. Finally, findings could be used to assist Navy detailers in placement of individuals in different assignments required to gain these needed skills, knowledge, and abilities or in assignments that require these skills. Applicability of these findings to the training programs will undoubtedly add value to the structure of that program, the experience gained by the officer with program completion, and the value of the program to the Navy and its Medical Service Corps community.

Limitations

This study is limited to the Navy MSC community, specifically those MSC officers holding the rank of Lieutenant; therefore it is not generalizable to the Navy at large or to other external entities. During the two iterations of the Delphi for this study, response rates were under 30%. If more junior Navy MSCs had responded during these waves, there is a possibility results may have differed slightly. More importantly, the study was comprised of a mix of researchers, providers and administrators. This study was focused on junior MSCs and the skills required for success in health care; therefore, the populations were relevant but future studies may look to be more specific, targeting solely researchers, providers or administrators. This may help discern any bias in opinion between the groups as well as assist in distinguishing which competencies and SKAs are more important for each group. The mix of respondents may also be a limiting factor; 54% of the responses for Wave II came from the administrative subspecialty group. The remaining subspecialty groups represented a 22.5% response rate for clinicians and 23.5% response rate for research scientists. Encouragement from Specialty leaders during future studies may balance the response rate reflecting greater differences or interactions among the subspecialties. Along with the lopsided breakdown in the area of subspecialty the majority of the

respondents for this study, 70%, were males creating a potential bias. Future studies should attempt to include more female respondents. Furthermore this study focused on junior MSCs in the pay grade of O-3, inclusion of respondents at the O-1 and O-2 levels could provide greater insight into the requisite competencies and SKAs vital for success. The composition of the expert panel for this study may be a limiting factor as well. While every attempt was made to establish an unbiased opinion, the expert panel consisted of all Caucasian males, having a more racially and gender diverse panel potentially could have altered the development of competency domains. Finally, the panel itself was somewhat focused on what they felt were the critical SKAs for MSCs, and also felt they were dumbing down the role of the junior MSC in the eyes of senior MSCs.

Conclusion

This study incorporates into the growing body of research that seeks to identify the requisite SKAs and competencies required of future health care executives. It shows that a distinct set of competencies exists that current and future MSCs should seek to possess. However the priority among the MSC subspecialties regarding these SKAs differs to some degree depending on their subspecialty area of expertise.

In answering the research questions it is clear that differences do exist between the perceived and required SKAs for junior MSCs across the three-subspecialty communities. This reinforces the need for the establishing standards in SKAs so that as MSC's progress over their careers they acquire an understanding of the important competencies required. Since this study identifies the relevant competencies and important SKAs necessary for future junior MSCs, it adds to the continued reliability and validity of the use of the Delphi technique. Accrediting

organizations such as ACHE, AAMA, and other professional groups place a focus on developing a standard for competence. They hold professional conferences yearly in order to discuss and facilitate ideas for SKA development. As an organization that prides itself in training and preparing the best and the brightest to take on the challenges of tomorrow, the Navy and DoD as a whole must follow suit. The healthcare industry and the Navy have and will continue to be person-oriented organizations that are focused on those that can successfully lead and manage into the future.

Recommendations

Over the last ten years health care in the United States and the DoD has undergone dramatic changes in a shortened period of time due to issues surrounding cost, quality, and access to care, as well as supporting the global war on terror. In response to these changes health care in the Navy has evolved. As a part of that evolution, the competencies required for junior MSCs have also changed. Our greatest asset continues to be our personnel and we must provide them the resources to avoid failure. In order to ensure the success of our organization, it is critical to evaluate the differing perceptions of critical competencies between MSCs. This study compared the opinion of junior Navy MSC officers on the competencies and the accompanying skills, knowledge, and abilities (SKAs) Navy healthcare professionals will require in the future for the organizations success.

Results from this study indicate significant differences in opinion between junior Navy MSCs across the subspecialties groups, between the importances's of each SKA within specific domains, and between the ratings of specific SKAs among all groups to overall group rating patterns. The implications of these results are extremely important for junior Navy MSCs as they

develop in their career. This study indicates a need for improvement in the development of junior Navy health care executives specifically in the areas of Leadership and Management. Training programs focusing on these SKAs should be part of officer training pipeline. Furthermore, this study warrants, more detailed, competency research in order to develop the most relevant refresher training programs for junior MSCs throughout the Navy's health care system.

Additionally, demographic data relating to the level of degree completed can be obtained and analyzed further to determine if academic programs are providing adequate preparation for MSCs. Also, do the credentials of those academic programs provide the necessary groundwork needed by MSCs in the future. Questions regarding whether the thoroughness of web based education programs are meeting the academic needs of the healthcare discipline exist.

These results can also be used by senior MSCs across all three subspecialties to determine the focus of targeted mentorship programs. Programs such as the "MSC Seabag" and mentoring lunches can be developed further to touch on the development of SKAs for junior MSCs. In addition, specialty leaders can assess this research to help identify their professional competency gaps.

Finally, to ensure successful succession planning the Navy must ensure that future Junior MSCs possess the skills required to be successful in the health care environment. Tools like the MSC roadmap and the 40 executive competencies need constant refreshing and validation since they provide detailers and subspecialty leaders insight into the capabilities of an individual. Since Healthcare still remains one of this country's largest employers, further studies of this type will be necessary to ensure the relevant skills are taught to healthcare executives in order to foster the success of the healthcare industry and the future of Navy medicine.

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Table 1

Tentative Navy Junior Medical Service Corps Competency Domains and Initial Frequency Counts

Tentative Medical Service Corps Competency Domains	Nr Items-All	Nr Unique Items
Leadership	57	9
Professional Development	44	16
Personality Traits	28	19
Management	26	10
Joint Operations	22	17
Business Management	22	11
Strategic Management/Critical Thinking	19	9
Military Knowledge	14	7
Communication	12	5
Clinical/Scientific	12	10
Operational Experience	10	2
Mentorship	10	1
Miscellaneous	8	7
Human Resources	8	4
Teamwork	7	3
Computers/Technical	6	4
Organizational Behavior	3	2
Healthcare	3	3
Total	311	139

Table 2

Reported Frequencies of Competency Items Within Tentative
Navy Junior Medical Service Corps Competency Domains

Competency Items Within Junior Medical Service Corps Leader Domains	Frequencies	Unique Competencies
Leadership	(57)	9
•Leadership	49	
•Decision Maker	1	
•Leadership Management	1	
•Leadership Skills	1	
•Navy Leadership	1	
•Planning and Decision Making	1	
•Qualitative Leadership	1	
•Senior Leadership	1	
•Servant Leadership	1	
Professional Development	(44)	16
•Education/Advanced	7	
•Professional Expertise	7	
•Competence/Cross Competence	5	
•Ethics	4	
•Career Development	3	
•Professional Knowledge	3	
•Continuous Improvement	3	
•Executive Medicine	2	
•Military Bearing	2	
•Professionalism	2	
•Advancement	1	
•Core Values	1	
•Military Business Training	1	
•Operations Related Skills	1	
•OTAP	1	
•Professional Membership	1	

Table 2 (Cont)

Reported Frequencies of Competency Items Within Tentative
Junior Navy Medical Service Corps Competency Domains

Competency Items Within Junior Medical Service Corps Leader Domains	Frequencies	Unique Competencies
Personal Traits	(28)	19
•Initiative	5	
•Adaptability	2	
•Character	2	
•Flexibility	2	
•Motivation	2	
•Perseverance	2	
•Compassion	1	
•Competitiveness	1	
•Consistency	1	
•Courage	1	
•Emotional Intelligence	1	
•Honesty	1	
•Honor	1	
•Humility	1	
•Integrity	1	
•Personal Skills	1	
•Resiliency	1	
•Responsibility	1	
•Stewardship	1	
Management	(26)	10
•Management	11	
•Administration	5	
•Organization	2	
•Time Management	2	
•Change Management	1	
•Knowledge Management	1	
•Manage your boss	1	
•Patient Administration	1	
•Public Health Management	1	
•Self Management	1	

Table 2 (Cont)

Reported Frequencies of Competency Items Within Tentative
Junior Navy Medical Service Corps Competency Domains

Competency Items Within Junior Medical Service Corps Leader Domains	Frequencies	Unique Competencies
Joint Operations	(10)	8
•CBRNE Proficiency	2	
•Environmental Analysis	2	
•Military Mission	2	
•Operational Personnel Planner	2	
•Operational Readiness	2	
•Antiterrorism General Threat	1	
•FMF	1	
•Increased Naval Experience	1	
•Joint Forces Training	1	
•Joint Officer	1	
•Joint Professional Education	1	
•Medical Planning	1	
•Medical Regulating	1	
•Mission Comprehension	1	
•MTF Operations	1	
•Operational Risk Management	1	
•Threat Analysis	1	
Business Management	(22)	11
•Finance	5	
•Program Management	3	
•Project Management	3	
•Qualitative Analysis	2	
•Research Analysis	2	
•Resource Management	2	
•Business Management	1	
•Outcomes Research	1	
•Practice Management	1	
•Supply	1	
•Systems	1	

Table 2 (Cont)

Reported Frequencies of Competency Items Within Tentative
Junior Navy Medical Service Corps Competency Domains

Competency Items Within Junior Medical Service Corps Leader Domains	Frequencies	Unique Competencies
Strategic Management and Planning	(19)	9
•Creative Think	3	
•Forecasting and predictive modeling	3	
•Strategic Analysis	3	
•Strategic Management	3	
•Problem Solving	2	
•Strategic Vision	2	
•Crisis Resolution	2	
•Decision Analysis	2	
•Reasoning	2	
Military Knowledge	(14)	7
•Military Knowledge	6	
•Military Structure/Organization	3	
•Military Sciences	1	
•Naval Competency	1	
•Navy Minded	1	
•Understanding BUMED COC	1	
•Understanding DOD COC	1	
Communication	(12)	5
•Communication	8	
•Advising Senior Leadership	1	
•Interpersonal Skills	1	
•Public Speaking	1	
•Risk Communication	1	
Clinical/Scientific	(12)	10
•Clinical Aptitude	2	
•Optometrist	2	
•Clinical Expertise	1	
•Forensic Practices	1	
•In depth scientific abilities	1	
•Medical Research and development	1	
•Pharmacy	1	
•Physical Therapy	1	
•Preventive Medicine	1	
•Science Program Director	1	

Table 2 (Cont)

Reported Frequencies of Competency Items Within Tentative
Navy Junior Medical Service Corps Competency Domains

Competency Items Within Junior Medical Service Corps Leader Domains	Frequencies	Unique Competencies
Operational Experience	(10)	2
•Deployment Experience	7	
•Operational Medicine	3	
Mentorship and Staff Development	(10)	1
•Mentorship	10	
Miscellaneous	(8)	7
•Physical Fitness	2	
•Diversity in Assignments	1	
•Environmental Health Site Assessment	1	
•Family	1	
•Food safety and sanitation	1	
•Industrial Hygiene	1	
•New/Junior Officer Responsibility	1	
Human Resources	(8)	4
•Human Resource Management	5	
•Human Performance	1	
•Human Relations	1	
•Resource Allocation and Management	1	
Teamwork	(7)	3
•Teamwork	5	
•Team player	1	
•Medical Team Building	1	

Table 2 (Cont)

Reported Frequencies of Competency Items within Tentative
Junior Navy Medical Service Corps Competency Domains

Competency Items Within Junior Medical Service Corps Leader Domains		Frequencies	Unique Competencies
Computer/Technical		(6)	4
•Technical Expertise		2	
•Technical Abilities		2	
•Information analysis and communication skills		1	
•Computers		1	
Organizational Behavior		(3)	2
•Individual and Organizational Behavior		2	
•Organizational Development		1	
Healthcare		(3)	3
•HCA 1			
•Healthcare Delivery Systems		1	
•Healthcare in a Complex Environment		1	
Total		311	139

Table 3

Competency Domains Post Expert Panel Junior Medical Service Corps and Frequency Counts
Navy Junior Medical Service Corps Officers

Junior Medical Service Corps Competency Domain	Total Competencies	Unique Domain Items
<i>I. Leadership</i>	57	1
<i>II. Management</i>	51	11
<i>III. Professional Development</i>	39	11
<i>IV. Subspecialty Expertise</i>	37	3
<i>V. Core Values</i>	32	5
<i>VI. Strategic Management and Planning</i>	21	11
<i>VII. Joint Operations/Readiness</i>	15	9
<i>VIII. Communication</i>	14	6
<i>IX. Military Knowledge</i>	12	1
<i>X. Operational Experience</i>	12	3
<i>XI. Mentorship</i>	10	1
<i>Totals</i>	300	62

Table 4

Wave I
Skills, Knowledge, and Abilities (SKA) Item Rating Reliability Coefficients

Domain	No. Of SKA Items Rated	Administrator Respondents (n=43)	Cronbach's α Research Respondents (n=19)	Clinician Respondents (n=18)	All Respondents (n=80)
Leadership	19	.915	.905	.810	.898
Management	17	.892	.922	.920	.911
Professional	13	.833	.851	.834	.890
Development	12	.890	.885	.884	.879
Subspecialty Expertise	10	.885	.843	.691	.837
Core Values	7	.827	.820	.759	.814
Strategic Management	5	.689	.844	.741	.764
Joint Operations	5	.505	.635	.716	.591
Communications	4	.883	.838	.866	.880
Military	4	.742	.805	.884	.808
Knowledge	4	.805	.827	.766	.800
Operational					
Experience					
Mentorship					
All Domains	100				

Note. Responses were recorded on a 7-point Likert rating scale, with 1 = unimportant to 7= extremely important

Table 5

Study Demographics by Subspecialty

Specialty Code	Subspecialty Name	# Navy Wide	# in Study	% of Study
Administrators				%
1800	Healthcare Administration	120	26	21.70%
1801	Patient Administration	31	2	5.61%
1802	Medical Logistics	29	5	5.24%
1803	Medical Data Services Administration	3	1	0.54%
1804	Medical Construction	6	0	1.08%
1805	Plans Operations Medical Intelligence	23	2	4.16%
3110	Comptroller	18	2	3.25%
3121	Logistics	4	0	0.72%
3130	Manpower Systems Analysis Mgmt	8	1	1.45%
3150	Education and Training Management	1	1	0.18%
3211	Operations Research Analysis	1	2	0.18%
6210	Management Information	6	0	1.08%
				45%
Clinicians				
1840	Clinical Psychology	27	3	4.88%
1841	Child Psychology	1	0	0.18%
1844	Aerospace Experimental Psychology	8	5	1.45%
1845	Research Psychology	2	1	0.36%
1874	Occupational Therapy	4	2	0.72%
1876	Dietetics	8	0	1.45%
1880	Optometry	39	8	7.05%
1887	Pharmacy	30	3	5.42%
1892	Podiatry	4	0	0.72%
1893	Physician Assistant	48	2	8.68%
				31%
Scientists				
1810	Biochemistry	12	2	2.17%
1815	Microbiology	14	2	2.53%
1825	Radiation Health	8	1	1.45%
1828	Radiation Specialist	1	0	0.18%
1835	Physiology	3	0	0.54%
1836	Aerospace Physiology	14	1	2.53%
1850	Entomology	3	2	0.54%
1860	Environmental Health	18	2	3.25%
1861	Industrial Hygiene	23	2	4.16%
1862	Audiology	6	0	1.08%
1865	Medical Technology	13	2	2.35%
1870	Social Work	7	0	1.27%
1873	Physical Therapy	10	0	1.81%
				24%

Table 6

Wave II Top 18 SKAs According to Ratings (6.2 and greater)

Highest Rated SKAs Overall			
Domain	SKA	Mean rating	Std. Dev.
Core Values	Doing the right thing when no one else is around.	6.66	± .86
Communication	Ability to read, write, and speak clearly	6.64	± .80
Core Values	Initiative and Drive	6.56	± .79
Subspecialty	Knowledge of specialty area		
Expertise		6.50	± .77
Core Values	Judgment	6.49	± .67
Leadership	Leading by Example	6.45	± .70
Joint Operations	Understand the Mission	6.41	± .72
Leadership	Ability to make decisions and defend them	6.36	± .85
Leadership	Demonstrate core values, integrity, and ethical decision making while leading	6.31	± .93
	Knowledge of your field of expertise, up to date with current technologies and ideas, regular training to improve on professional skills, participate in conferences to gain skills and information as well as provide skills and information.	6.29	± .87
Core Values			
Leadership	Communicate clear and concise orders	6.28	± 1.07
	Doing what is right for the Navy or people not oneself	6.28	± 1.07
Core Values			
Core Values	Willingness to learn and try new ways	6.26	± 1.07
Core Values	Willingness to hear others ideas	6.24	± 1.27
Strategic Management	Resourcefulness (knowing where to look for information)	6.24	± 1.31
	Develop what you are taught and give it to others as you become more senior.	6.23	± .79
Mentorship			
Core Values	Endurance/Persistence.	6.21	± .77
Strategic Management	Ability to take information, synthesize it, and think and make independent decisions.	6.21	± .82

Note. Responses were recorded on a 7-point Likert rating scale, with 1 = unimportant to 7 = extremely important

Table 7

Wave II Lowest 17 SKAs According to Ratings (5.0 and lower)

Lowest Rated SKAs Overall			
Domain	SKA	Mean rating	Std. Dev.
Professional Development	Must being willing to take the headquarters position to learn the organization from within.	4.99	± 1.37
Management	Scheduling both clinical and administrative staff.	4.98	± 1.25
Management	Systematic approach to complex problems with POA&M management.	4.96	± 1.44
Operational Experience	Understanding the difference between BSO 18 and 27, understanding the HSAP process, understanding the structure and mission of USMC and USN operational medicine (emphasis on Joint) cannot be understated.	4.93	± 1.44
Subspecialty Expertise	Risk Assessment Workplace monitoring Risk Communication.	4.91	± 1.29
Management	Understand how supplies are; ordered, how to tell what is on order, when it arrives, and how to determine what you need and how much to have on hand.	4.90	± 1.22
Professional Development	Statistical analysis (regression, ANOVA, correlations), Experimental design, Critical thinking, Interdisciplinary skills.	4.88	± 1.24
Subspecialty Expertise	Forecasting Homeland Security Medical Planning Expeditionary Medicine.	4.86	± 1.44
Subspecialty Expertise	Management of public health programs to include immunizations, sexual transmitted disease counseling and tracking, disease and non-battle injury (DNBI) reports.	4.84	± 1.60
Subspecialty Expertise	Humanitarian Assistance	4.75	± 1.55
Professional Development	Professional Affiliation	4.71	± 1.38
Management	Implementing quality management strategies including Shewart cycle, feedback mechanisms and performance metrics. M2, Lean Six Sigma, ALTHA.	4.7	± 1.50

Note. Responses were recorded on a 7-point Likert rating scale, with 1 = unimportant to 7= extremely important

Table 7 (Cont)

Wave II Lowest 17 SKAs According to Ratings (5.0 and lower)

Lowest Rated SKAs Overall			
Domain	SKA	Mean rating	Std. Dev.
Management	CivPers (GS) Mato contracts ISA contracts Personal vs. Nonpersonal Contracts Staffing Models Staffing Benchmarks.	4.6	± 1.42
	Market analysis, job availabilities; resume writing and transition or adjustment tools.	4.58	± 1.56
Professional Development	Clinical microbiology, clinical laboratory testing skills, clinical reasoning skills, clinical research skills	4.58	± 1.74
Subspecialty Expertise	Strategic Management COCOM structures	4.55	± 1.48
Subspecialty Expertise	Maintaining correct forensics practices and DOD drug testing laboratory.	4.44	± 1.85
<i>Note.</i> Responses were recorded on a 7-point Likert rating scale, with 1 = unimportant to 7= extremely important			

Table 8

Top 5 SKAs by Subspecialty

Highest Rated SKAs for Administrators			
Domain	SKA	Mean rating	Std. Dev.
Core Values	Doing the right thing when no one else is around.	6.65	± .61
Core Values	Initiative and Drive.	6.60	± .69
Joint Operations	Understand the mission.	6.60	± .65
Communication	Ability to read, write, and speak clearly	6.60	± .65
Leadership	Ability to make decisions and defend them.	6.56	± .73
Highest Rated SKAs for Research Scientists			
Domain	SKA	Mean rating	Std. Dev.
Communication	Ability to read, write, and speak	6.74	± .55
Subspecialty Expertise	Knowledge of your specialty area	6.68	± .46
Core Values	Doing the right thing when no one else is around	6.63	± .67
Core Values	Judgment	6.53	± .60
Core Values	Initiative and Drive	6.47	± .82
Strategic Management	Be able to formulate original thought and arguments to support needed processes	6.32	± .73
Communication	Capability of presenting presentations, briefs, etc.	6.32	± .65
Highest Rated SKAs Clinicians			
Domain	SKA	Mean rating	Std. Dev.
Leadership	Team Building - building morale for the entire team.	6.83	± .50
Operational Experience	Working knowledge of how patient care is provided during deployment on land, sea, or air.	6.72	± .45
Core Values	Judgment.	6.67	± .58
Professional Development	Must being willing to take the headquarters position to learn the organization from within.	6.61	± .59
Military Knowledge	Knowledge of Operational functions.	6.56	± .76

Note. Responses were recorded on a 7-point Likert rating scale, with 1 = unimportant to 7= extremely important

Table 9

Lowest 5 SKAs by Subspecialty

Lowest Rated SKAs for Administrators			
Domain	SKA	Mean rating	Std. Dev.
Professional Development	Professional Affiliation.	4.74	± 1.50
Professional Development	Market analysis, job availabilities; resume writing and transition or adjustment tools.	4.74	± 1.57
Subspecialty Expertise	Humanitarian Assistance.	4.7	± 1.41
Subspecialty Expertise	Maintaining correct forensic practices at DoD drug testing laboratory.	4.35	± 1.68
Subspecialty Expertise	Clinical microbiology, clinical laboratory testing skills, clinical reasoning skills, clinical research skills.	4.16	± 1.72
Lowest Rated SKAs for Research Scientists			
Domain	SKA	Mean rating	Std. Dev.
Subspecialty Expertise	Strategic Management COCOM structures. Implementing quality management strategies including Shewart cycle, feedback mechanisms and performance metrics. M2,	4.63	± 1.35
Management	Lean Six Sigma, ALTHA.	4.53	± 1.57
Management	CivPers (GS) MATO Contracts ISA Contracts Personal vs Non-Personal Contracts Staffing Models Staffing Benchmarks	4.47	± 1.79
Operational Experience	Understanding the difference between BSO 18 and 27, understanding the HSAP process, understanding the structure and mission of USMC and USN operational medicine (emphasis on Joint) cannot be understated.	4.47	± 1.57
Management	Scheduling both clinical and administrative.	4.05	± 1.61
Lowest Rated SKAs for Clinicians			
Domain	SKA	Mean rating	Std. Dev.
Professional Development	Work as a team with all subspecialties.	4.22	± 1.62
Communication	Excellent "chair-side" manner.	4.17	± 1.38
Core Values	Adapting to the environment/situation.	3.72	± 1.41
Strategic Management	Vision	3.72	± 1.56
Management	Understand HR Systems to include Civilian, Contract, and Military Personnel: How to: hire/promote, hold people accountable, and reward people.	3.61	± 1.53

Note. Responses were recorded on a 7-point rating scale, with 1 = unimportant to 7= extremely important

Table 10

MSC Subspecialties

Tests of Between-Subjects Effects

Dependent Variable: Score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	570.635 ^a	32	17.832	15.029	.000
Intercept	98958.840	1	98958.840	83400.681	.000
group	90.068	2	45.034	37.954	.000
Domain	387.181	10	38.718	32.631	.000
group * Domain	121.545	20	6.077	5.122	.000
Error	4137.490	3487	1.187		
Total	122345.000	3520			
Corrected Total	4708.125	3519			

a. R Squared = .121 (Adjusted R Squared = .113)

Interaction Effects amongst MSC Subspecialties

Score

Tukey HSD^{a,b}

Domain	N	Subset					
		1	2	3	4	5	6
2 Management	320	5.02					
10 Op Experience	320		5.43				
9 Military Knowledge	320		5.58	5.58			
7 Joint Ops-Readiness	320		5.69	5.69	5.69		
11 Mentorship	320			5.76	5.76	5.76	
3 Prof. Development	320				5.92	5.92	5.92
8 Communications	320				5.93	5.93	5.93
4 Subspecialty Expertise	320					6.02	6.02
6 Strategic Management & Planning	320						6.05
1 Leadership	320						6.09
5 Core Values	320						6.10
Sig.		1.000	.083	.574	.161	.101	.600

Means for groups in homogeneous subsets are displayed.

Based on Type III Sum of Squares

The error term is Mean Square(Error) = 1.187.

a. Uses Harmonic Mean Sample Size = 320.000.

b. Alpha = .05.

Table 10 (Cont)

Score		
Tukey HSD ^{a,b}		
Domain	Subset	
	5	6
2 Management		
10 Op Experience		
9 Military Knowledge		
7 Joint Ops-Readiness		
11 Mentorship	5.76	
3 Prof. Development	5.92	5.92
8 Communications	5.93	5.93
4 Subspecialty Expertise	6.02	6.02
6 Strategic Management & Planning		6.05
1 Leadership		6.09
5 Core Values		6.10
Sig.	.101	.600

Means for groups in homogeneous subsets are displayed.

Based on Type III Sum of Squares. The error term is Mean Square (Error) = 1.187.

a. Uses Harmonic Mean Sample Size = 320.000.

b. Alpha = .05

Interaction Effects amongst MSC Subspecialties

Score			
Tukey HSD ^{a,b,c}			
group	N	Subset	
		1	2
2 clinician	792	5.49	
3 research	836		5.82
1 admin	1892		5.89
Sig.		1.000	.334

Means for groups in homogeneous subsets are displayed.

Based on Type III Sum of Squares

The error term is Mean Square(Error) = 1.187.

a. Uses Harmonic Mean Sample Size = 1004.238.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = .05.

Table 11

Summary of Demographic Data from Wave II

Variable	Administrators (n=43)		Clinicians (n=18)		Scientists (n=19)	
	Mean \pm SD	No. (%)	Mean \pm SD	No. (%)	Mean \pm SD	No. (%)
Age, Years	38 \pm 3.6	-	33.00 \pm 6.3	-	36.74 \pm 4.51	-
Experience	15.22 \pm 6.17	-	8.58 \pm 7.25	-	9.11 \pm 6.6	-
Sex						
Male	-	33(77.00)	-	9 (50.00)	-	14 (72.00)
Female	-	10(23.00)	-	9 (50.00)	-	5 (26.00)
Professional Affiliation						
ACHE	-	17(39.00)			-	
AAMA	-	8 (16.00)			-	
Other	-	12(27.00)		16(89.00)	-	16(89.00)
None		9(21.00)		2(11.00)		2 (11.00)
Degree Obtained						
Bachelor	-	43(100)	-	18(100)	-	19(100)
Masters	-	41(93.00)	-	15(83.00)	-	16(84.00)
Doctorates	-	0 (0)	-	6(33.00)	-	3(16.00)
Deployment Years	-	36(75.00)	-	9(50.00)	-	9(47.00)
	1.43 \pm 1.28		1.11 \pm 1.50		1.16 \pm 1.90	

Note. The variables Professional Affiliation and Degree Obtained are not mutually exclusive.

Table 12

Wave II Two Highest Rated SKA Items by Domain and Subspecialty

Administrator Competency Domain	SKA Item Statement	Mean \pm SD
Leadership	Ability to make decisions and defend them.	6.56 \pm 0.73
	Leading by example	6.5.5 \pm 0.66
Management	Multi-tasking. Ability to manage a myriad of tasks and programs	6.33 \pm 0.71
	Demonstrate department head level ability to manage resources (personnel, financial, facilities, etc.)	6.30 \pm 0.73
Professional Development	Be versatile in many areas. Have a fundamental understanding of operational, clinical, and MHS functions	6.14 \pm 0.73
	Military Bearing	6.17 \pm 1.09
Subspecialty Expertise	Knowledge of specialty area	6.28 \pm 0.82
	Learn about the Navy	5.86 \pm 1.00
Core Values	Doing the right thing when no one else is around	6.68 \pm 0.61
	Initiative and Drive	6.65 \pm 0.69
Strategic Management	Resourcefulness (knowing where to look for information)	6.35 \pm 0.74
	Be able and willing to think of extraordinary concepts for doing tasks rather than just doing it the "same way it has always been done". (Think outside the Box)	6.30 \pm 0.63
Joint Operations	Understand the mission	6.60 \pm 0.65
	Lead from the front. Uniform Appearance and Physical Fitness lend to the credibility of a leader	6.07 \pm 1.07
Communications	Ability to read, write, and speak clearly	6.60 \pm 0.65
	Capability of presenting presentations, briefs, etc.	6.60 \pm 0.65
Military Knowledge	Understand how MSC Community melds into Big Navy	5.93 \pm 0.97
	Knowledge of Operational functions.	5.84 \pm 0.80
Operational Experience	Interoperability	5.84 \pm 0.96
	Working knowledge of how patient care is provided during deployment on land, sea, or air.	5.72 \pm 1.11
Mentorship	Develop what you are taught and give it to others as you become more senior	6.35 \pm 0.77
	Provide wisdom, insight, and relate to others	5.93 \pm 0.87

Table 12 (Cont)

Two Highest Rated SKA Items by Domain and Subspecialty

Research Scientists Competency Domain	SKA Item Statement	Mean \pm SD
Leadership	Demonstrate core values, integrity, and ethical decision making while leading	6.42 \pm 0.88
	Professional writing and communication skills	6.32 \pm 0.73
Management	Analytical thinking; Statistical techniques; Problem solving; Critical thinking; Planning	6.26 \pm 0.91
	Multi-tasking. Ability to manage a myriad of tasks and programs	6.16 \pm 0.74
Professional Development	Working knowledge of Microsoft Office Suite- Excel, Word, Powerpoint, etc	6.37 \pm 0.93
	Ability to receive, process and interpret data/information in a dynamic environment, synthesize information to make meaningful decisions and communicate in a meaningful and effective way	6.37 \pm 0.67
Subspecialty Expertise	Knowledge of specialty area	6.68 \pm 0.46
	Continuing Education, Certification, Research	6.16 \pm 1.18
Core Values	Doing the right thing when no one else is around	6.63 \pm 0.67
	Judgment	6.53 \pm 0.60
Strategic Management	Resourcefulness (knowing where to look for information)	6.37 \pm 0.87
	Be able to formulate original thought and arguments to support needed processes	6.32 \pm 0.73
Joint Operations	Understand the mission	6.42 \pm 0.59
	Lead from the front. Uniform Appearance and Physical Fitness lend to the credibility of a leader	5.79 \pm 0.95
Communications	Ability to communicate clearly across multiple arenas (civilian, military, medical, business, and community) and at various levels of the chain of command arenas	6.42 \pm 0.59
	Capability of presenting presentations, briefs, etc.	6.32 \pm 0.65
Military Knowledge	Knowledge of Operational functions	6.05 \pm 0.76
	Military customs and courtesy	5.79 \pm 0.69
Operational Experience	Operational Experience	5.95 \pm 0.83
	Interoperability	5.79 \pm 0.83
Mentorship	Develop what you are taught and give it to others as you become more senior	6.16 \pm 0.81
	Provide wisdom, insight, and relate to others	6.05 \pm 0.76

Table 12 (Cont)

Two Highest Rated SKA Items by Domain and Subspecialty

Clinician Competency Domain	SKA Item Statement	Mean \pm SD
Leadership	Team Building - building morale for the entire team	6.83 \pm 0.50
Management	Desire to meet others needs above your own	6.22 \pm 0.97
	Be able to support opinions, arguments, and point papers with substantiated analysis. Requires ability to quantify certain metrics and adeptly translate them into terms that support requirement but are also easily understood by audience	6.44 \pm 0.68
	Understand principles of cost-benefit, cost-effectiveness, and cost-utility analyses. Know difference between humanistic vs. economic outcomes	6.22 \pm 0.71
Professional Development	Keeping up to date with new treatment and diagnosis, skills sets, new technology, and state and federal competencies	6.11 \pm 0.99
	Market analysis, job availabilities; resume writing and transition or adjustment tools	6.00 \pm 0.75
Subspecialty Expertise	Knowledge of specialty area	6.44 \pm 0.83
	Participation in community to find out latest updates in the field	6.44 \pm 0.76
Core Values	Judgment	6.67 \pm 0.58
	Interoperability. Appreciation of sister Services	6.44 \pm 0.60
Strategic Management	A sound proficiency in statistical analysis and interpretation to include predictive modeling, forecasting and other statistical/research design	5.94 \pm 0.78
	Be able and willing to think of extraordinary concepts for doing tasks rather than just doing it the "same way it has always been done". (Think outside the Box)	5.89 \pm 1.15
Joint Operations	Patient regulation across platforms and services for joint environments	6.00 \pm 0.94
	Strategy & Policy National Security Decision Making Joint Military Operations Interagency Process	5.83 \pm 1.07
Communications	Knowledge of chain of commands: BUMED, COCOM, USMC, etc.	6.44 \pm 0.60
	Ability to read, write, and speak clearly	5.89 \pm 0.94

Table 12 (Cont)

Two Highest Rated SKA Items by Domain and Subspecialty

Clinician		
Competency Domain	SKA Item Statement	Mean \pm SD
Military Knowledge	Knowledge of Operational functions	6.56 \pm 0.76
	Understand how MSC Community melds into Big Navy	5.94 \pm 1.39
Operational Experience	Working knowledge of how patient care is provided during deployment on land, sea, or air	6.72 \pm 0.45
	Interoperability	6.56 \pm 0.50
Mentorship	Develop what you are taught and give it to others as you become more senior	6.11 \pm 0.87
	Ability to get personnel involved in the community	5.50 \pm 1.38

Appendix A

Endorsement Letter

Shaw, Kenneth A. L T

From:

Slaughter, Martha M., CAPT NM
MPT&E Thursday, September 20,
2007 11 :28 AM

To:

Adams, Barry D. LCDR/04 BUMED; Adams, William J. CAPT BUMED; Barnes, Timothy D CDR; Beaujon, Jan R ; Bipes, Mark E CIV; Bouma, Matthew F. LCDR BUMED; Bourne, Mark Jeffrey CDR; Bradshaw, Kevin R. (CDR); Breier, David N CDR; Ziemke, Gregg W CAPT; Beavers, Mark CAPT; CAPT Marty Petrillo; CDR Bob Rahal; CDR Dennis Smith, MSC, USN; CDR John Ralph, MSC, USN; CDR Kim Ferland; Malone, Patrick S., CDR NM MPT&E; Ciorlito, Larry R. (CDR); Cohn, Joseph V., LCDR NM MPT&E; Collins, David C. (CDR); Dave Gibson; David Lesser (david.lesser@us.army.mil); David Tomlinson; Fletcher, Douglas W LCDR NNMC; Haberberger, Richard, CAPT, OASD(HA)/TMA; Hagen, Donald CAPT.
BUM ED; Hendee, Michael- TAMC; Hoffman, Eric R. (LCDR); Holder, William D LCDR; John K Schmidt Uohn.k.schmidt@navy.mil); Klette, Kevin L., COR; LCOR Greg Morris; LCDR Rod Boyce; Martel, Ron COR MSC; Martin, James L. (LCDR); Michael Rosenthal; Miller, Patricia A, LCDR NM MPT&E; Montcalm-Smith, Elizabeth; Moore, Kevin M CDR; Mundt, Victoria L. CAPT BUM ED; Naguit, Manuel E (CDR); Nordholm, Alan F., CDR NM MPT&E; Olson, Charles E (LCDR); Pattison, Michael D CAPT NNMC; Poindexter III James B CDR MNFI SURGEON; Price, David E CAPT BUMED; Rahal, Robert A; Reynolds, Corbin, L T NM MPT&E; Rullan, Alberto A, CDR; Simon, Stephanie M. (CAPT); Sims, Leslie CDR; Stratton, Dave B. CAPT; Syring, Keith A CAPT BUMEO; Torsch, Virginia M. BUMED Contractor; Weinstein, Michele L. CDR BUMED; Wenzel, O. M., L T NM MPT&E; Wilkerson, Cynthia E, CDR; Williams, Kelly A (CDR)
Palacios, Cindi L.; Shaw, Kenneth A L T; D'Alessandro, John A CAPT BUMED; Weinstein, Michele L. CDR BUMED; Slaughter, Martha M., CAPT NM MPT&E

Subject: FW: MSC Project Information

Importance: High

Attachments: NAVY junior MSC Study

Timeline.doc

Sent: To:

Cc:

Dear Specialty Leaders & Assistant Specialty Leaders:
For your situational awareness: LT Cindi Palacios (at cindi.palacios@med.navy.mil) and LT Ken Shaw at kenneth.shaw@med.navy.mil are conducting a research study entitled: "Forge into the Future: Identifying Core Competencies and Skills, Knowledge, and Abilities (SKAs) for Navy Junior Medical Service Officers," which seeks to identify relevant competencies and important skills, knowledge, and abilities (SKAs) required for junior Medical Service Corps officers in the next five to ten years. The timeline for the study is attached.

The study is conducted in collaboration with OOMSC, NM MPT&E and researchers at Army Baylor University Graduate Program in Health and Business Administration. This study will utilize the Delphi technique, a widely recognized consensus-building tool that uses expert opinion to forecast trends and identify competencies. The selection criteria for this study includes; active duty Medical Service Corps officers with the

Forging the Future Junior MSC Study of SKAs Dec4

rank of 03, Lieutenant, a primary or secondary subspecialty of 18XX, a date of rank of 01 July 2002 through 01 July 2005, and a lineal number of 10872400 through 12803800. Once the study is completed, the research results will be shared with you. Next week the LTs will receive an external link to Navy Medicine Online via email. This link does not require them to login to NMO, and will include a questionnaire and demographic data sheet. Their responses will be kept confidential, and demographic data will be used to compute statistical significance. At no time will personal information be identified. The questionnaire will take approximately 10 to 15 minutes of their time.

Because the Medical Service Corps represents a myriad of professions, this study will identify commonalities and differences of opinions among these professions and provide a guide for future modifications to educational programs, career-planning guide, including roadmaps designed to support the development of the junior Medical Service Corps officer.

Please let me know if you have questions or concerns.

R/CAPT Slaughter

Appendix B

Junior MSC Letter Wave I

Dear Medical Service Corps Officer,

LT Ken Shaw, MSC, USN and I are residents in the Army-Baylor University Graduate Program in Health and Business Administration. We are conducting a research study on required competencies for junior Navy Medical Service Corps officers in the next five to ten years.

You were selected to participate in this study because you represent the future force of Navy Medicine and you are the expert who can identify what junior Medical Service Corp officers need in the future to succeed. Because the Medical Service Corps represents a myriad of professions, this study will identify commonalities and differences of opinions among these professions and provide a guide for future modifications to educational programs, career planning guide, and roadmaps designed to support the development of the junior Medical Service Corps officer.

This study requires you to complete two questionnaires, one with attached link below and another over a two-week period beginning in early November. Each questionnaire will take approximately 10 to 15 minutes to complete. After this study is complete you will be sent the final results.

Initial data collection for the study will be collected via Navy Medicine Online. Please click on the link below in order to begin (You do not have to log into NMO). Please click on the link below in order to begin (You do not have to log into NMO) and enter the key MJhp8regKIaNH.

http://navymedicine.med.navy.mil/survey/default.cfm?survey_id=790&survey

If you have any questions please contact Lead Researchers, LT Cindi Palacios at cindi.palacios@med.navy.mil, or by phone at 910-450-4468 or LT Ken Shaw at kenneth.shaw@med.navy.mil, or by phone 401-841-3444 or refer to the attached background information page.

LT Shaw and I would like to thank-you in advance for your participation.

LT Cindi Palacios
MSC, USN

Appendix C

Specialty Leader Letter

Dear Medical Service Corps Specialty Leaders,

As current leaders and the future force of Navy Medicine, I would like to invite you to participate in a research project aimed at rating junior Medical Service Corps competencies. This study will identify competencies and associated skills, knowledge, and abilities (SKAs) required by all subspecialties across the Medical Service Corps. Because the Medical Service Corps represents a myriad of professions, this study will identify commonalities and differences of opinions among these professions and provide a guide for future modifications to educational programs and roadmaps designed to support the development of the junior Medical Service Corps Officer. The selection criteria for this study includes active duty Medical Service Corps officers with the rank of O3, Lieutenant having a date of rank of 01 July 2002 through 01 July 2005 with a lineal number of 10872400 through 12803800. Once the study is completed, the research results will be shared with you.

The study, entitled "Forge into the Future: Identifying Core Competencies and Skills, Knowledge, and Abilities (SKAs) for Navy Junior Medical Service Officers," seeks to identify relevant competencies and important skills, knowledge, and abilities (SKAs) required for junior Medical Service Corps officers in the next five to ten years. The study is conducted in collaboration with 00MSC, NM MPT&E and researchers at U.S. Army Baylor University Graduate Program in Health and Business Administration. This study will utilize the Delphi technique, a widely recognized consensus-building tool that uses expert opinion to forecast trends and identify competencies. Additionally, the Delphi technique can be used to clarify positions and delineate differences among diverse reference groups, such as subspecialties within the Medical Service Corps.

In the next few weeks you will receive an external link to Navy Medicine Online via email. This link will include a questionnaire and demographic data sheet. Your responses will be kept confidential and demographic data will be used to compute statistical significance. At no time will personal information be identified. The questionnaire will take approximately 30 minutes of your time.

If you have any questions please contact Lead Researchers, LT Cindi Palacios at cindi.palacios@med.navy.mil, Phone 910-450-4468 or LT Ken Shaw at kenneth.shaw@med.navy.mil.

Project Title: Forge into the Future: Identifying Core Competencies and Skills, Knowledge, and Abilities (SKAs) for Navy Junior Medical Service Corps Officers

Data For: Expert panel members participating in this study. The panel is scheduled to meet at National Naval Medical Command, Monday, October 29, 2007.

Preliminary Results:

The purpose of this research is to identify the most important competencies that Navy junior Medical Service Corps officers must possess to be successful. In September 2007, the Army-Baylor researcher team contacted 373 Navy junior Medical Service Corps officers. Officers were invited to voluntarily participate in the formation of a Delphi* network as part of the research project. Officers were asked to respond to an open-ended questionnaire, identifying five relevant competencies and important skills, knowledge, and abilities (SKAs) that Navy junior Medical Service Corps officers need to be successful in the next five to ten years.

The purpose of this Delphi expert panel meeting is to:

- 1) examine the Wave I competency item responses from the Delphi network,
- 2) sort the competency items into meaningful categories or content domains of like kinds of items, and
- 3) provide names or labels for the domains (groupings of competency items) in job-related, Navy Medical Service Corps language.

Of the questionnaires requested, 68 were returned (18% response rate). Respondents were asked to identify five competencies and important SKAs. The total frequency of response items was 311. Most respondents listed five items. Multiple respondents, reducing the total of 311 items to 139 unique competency items, listed many of the same item phrases. A preliminary grouping of like-kinds of competencies resulted in 18 domain categories. Many of these domains and competency items may be further sorted, combined, reduced, or expanded with the assistance of the expert panel.

* **Delphi** refers to a scientific research methodology used to consolidate expert opinion under a 'pooling of abilities' forecasting model, and was originally developed by the Rand Corporation, Santa Monica, CA. Delphi was a city in ancient Greece. In mythology, the oracle of Apollo at Delphi had the power to foretell or predict the future, e.g. the outcome of the Trojan War.

Forge into the Future: Identifying Core Competencies and Skills, Knowledge, and Abilities (SKAs) for Navy Junior Medical Service Corps Officers

You may keep this page.

Part 1 – Domain Overview**

Navy Junior Medical Service Corps	Total Competencies	Unique Domain Items
Competency Domain		
I. Leadership	57	1
II. Management	51	11
III. Professional Development	39	11
IV. Subspecialty Expertise	37	3
V. Core Values	32	5
VI. Strategic Management and Planning	21	11
VII. Joint Operations/Readiness	15	9
VIII. Communication	14	6
IX. Military Knowledge	12	1
X. Operational Experience	12	3
XI. Mentorship	10	1
Totals	300	62

**Feedback to the respondents

Part 2 – Detailed View of Competency Domain

I. Leadership – 1 Unique Item			
(Frequency that item was raised during Wave I is shown in table)			
Leadership	57		
II. Management – 11 Unique Items			
(Frequency that item was raised during Wave I is shown in table)			
Management	17	Organization	2
Human Resource Management	8	Time Management	2
Program Management	6	Business Management	1
Finance	5	Outcomes Research	1
Quantitative Analysis	4	Systems Analysis	1
Resource Management	4		

You may keep this page.

Part 2 – Detailed View of Competency Domains (cont'd)

III. Professional Development – 11 Unique Items

(Frequency that item was raised during Wave 1 is shown in table)

Education/Advanced Education	7	Executive Medicine	3
Computers/technical	6	Military Bearing	1
Teamwork/Team player	6	Diversity in Assignments	1
Competence/Cross Competence	5	Military Business Training	1
Career Development	4	OTAP	1
Continuous Improvement	3		

IV. Subspecialty Expertise – 3 Unique Items

(Frequency that item was raised during Wave 1 is shown in table)

Subspecialty Expertise	27	Professional Knowledge	3
Professional Expertise	7		

V. Core Values – 5 Unique Items

(Frequency that item was raised during Wave 1 is shown in table)

Core Values	11	Ethics	4
Adaptability	8	Professionalism	2
Initiative	7		

VI. Strategic Management and Planning - 11 Unique Items

(Frequency that item was raised during Wave 1 is shown in table)

Creative Think	3	Crisis Resolution	1
Forecasting and Predictive Modeling	3	Decision Analysis	1
Strategic Analysis	3	Planning and Decision Making	1
Strategic Management	3	Reasoning	1
Problem Solving	2	Organizational Development	1
Strategic Vision	2		

You may keep this page.

Part 2 – Detailed View of Competency Domains (cont'd)

<i>VII. Joint Operations - 9 Unique Items</i>			
<i>(Frequency that item was raised during Wave 1 is shown in table)</i>			
Operational Readiness	3	Crisis Resolution	1
Military Mission	3	Decision Analysis	1
CBRNE proficiency	2	Planning and Decision Making	1
Strategic Management	3	Reasoning	1
Problem Solving	2	Organizational Development	1
Strategic Vision	2		

<i>VIII. Communication – 6 Unique Items</i>			
<i>(Frequency that item was raised during Wave 1 is shown in table)</i>			
Communication	8	Interpersonal skills	1
Understanding COC	2	Public Speaking	1
Advising Senior Leadership	1	Risk Communication	1

<i>IX. Military Knowledge – 1 Unique Item</i>	
<i>(Frequency that item was raised during Wave 1 is shown in table)</i>	
Military Knowledge	12

<i>X. Operational Experience - 3 Unique Items</i>			
<i>(Frequency that item was raised during Wave 1 is shown in table)</i>			
Deployment Experience	7	Increased Naval Experience	1
Operational Medicine/FMF	4		

<i>XI. Mentorship - 1 Unique Item</i>	
<i>(Frequency that item was raised during Wave 1 is shown in table)</i>	
Mentorship	10

Appendix D

Junior MSC Letter Wave II

Dear Medical Service Corps Officer,

In September, Wave I of the study went out to approximately 553 Medical Service Corps Officers. The response rate was 19 percent. An expert panel of mid-level Navy Medical Service Corps officers then analyzed and categorized like kinds of key items together into groups. These groups, called 'domains' in this study, and the expert panel assigned a name to each domain that best summarizes the competency items within that domain. Wave II of the study gives respondents the opportunity to rate the identified important skill, knowledge, and ability (SKA) items that were generated from Wave I. Please be assured that confidentiality of your responses will be maintained.

The tables in the attached document summarize the responses that were provided in Wave I after the expert panel analyzed and categorized all of the responses. You should find this information interesting and insightful since all responses are generated from fellow Navy Medical Service Corps officers in the field - just like you. Please feel free to print the tables and refer to them as needed in your daily practice.

Please take the time to complete the following questionnaire. You may participate in this phase of the study even if you did not respond during Wave I. Although this instrument may appear longer than the Wave I questionnaire, it should take significantly less time to complete because of the standardized format. Please return the questionnaire by 05 December 2007.

To ensure maximum participation you can access this questionnaire online at:

http://navymedicine.med.navy.mil/survey/default.cfm?survey_id=801

Using the key: nZUjIdQ2rza

Or use the attached form and return by;

E-mail; cindi.palacios@med.navy.mil or kenneth.shaw@med.navy.mil;

Or by fax 910 - 450 - 4922.

Please select only one option to avoid duplication of results.

Please contact myself at (910) 546-9221 or LT Ken Shaw at (401) 841-3444 if you have any questions. You will receive a summary of the findings at the completion of this study.

V/r

LT Cindi Palacios, MSC, USN
Naval Hospital Camp Lejeune
910-450-4468